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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,841

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Kheng Chiong Tay

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7590

12/17/2004

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EXAMINER

WARREN, MATTHEW E

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,841

Applicant(s)

TAY ET AL.

Examiner

Matthew E Warren

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not disclose that a cavity is within a cavity as recited in claim 4.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claim includes the limitation of "the same horizontal datum." Although the specification mentions the limitation, it does not further elaborate on what is horizontal datum. Because this term is not understood, it cannot be determined as to how soldering terminals relate structurally to encapsulation material.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "a cavity provided within the cavity" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the soldering terminals are right at the bottom of the package." There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation " the soldering terminals are flat and have the same horizontal datum as the encapsulation material." There is insufficient antecedent basis for this limitation in the claim. Furthermore, it is not understood how the soldering terminals have horizontal datum. The specification mentions horizontal datum but does not elaborate on what that is. Because this term is not understood, it cannot be determined as to how soldering terminals relate structurally to encapsulation material. For purposes of examination, the claim will be interpreted to mean that "soldering terminals are flat.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Arndt et al. (US 6,459,130 B1).

In re claim 1, Arndt et al. shows (fig. 1c and 3) a miniaturized surface mount optoelectronic component, said optoelectronic component comprising: an electrically conductive material (17), the said material is used as a base material for an assembly; at least an optoelectronic chip (1), the said optoelectronic chip (1) is mounted on the base; and an electrical connection (16) between the optoelectronic chip and the electrically conductive material (17) by a wiring means (16); wherein the said base material is encapsulated with a hard transparent or translucent resin material (3) to enable optical radiation to be transmitted or received via the optoelectronic component (col. 4, lines 14-20).

In re claim 2, Arndt discloses that the electrically conductive material is metal (col. 2, lines 44-67).

In re claims 3 and 4, Arndt shows (fig. 1c) a cavity (4) is formed in the base (17) and that cavity is formed in another cavity (13) of the package.

In re claims 8 and 9, Arndt shows (fig. 1c) that soldering terminals (12) are formed on a bottom of the package and are flat.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt et al. (US 6,459,130 B1) as applied to claim 1 above, and further in view of Hurt et al. (US Pub. 2003/0007749 A1).

In re claims 5 and 6, Arndt shows all of the elements of the claims except the lens or the multiple lens structure to be part of the encapsulation material. Hurt et al. shows (fig. 5) that a lens structure is used in an optoelectronic package to launch radiation into an external fiber or focus received light into the die [0042 and 0043]. The reference does not specifically use multiple lens however multiple lens may be required for multiple devices such as components 3 and 4 shown in fig. 5. It would have been obvious to one of ordinary skill in the art to use three, four, etc., lenses to focus light into to multiple devices. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). See also MPEP 2144.04 VI. (B). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the package of Arndt by adding a lens as taught by Hurt to focus light into a optoelectronic device.

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arndt et al. (US 6,459,130 B1) as applied to claim 1 above, and further in view of Kwon et al. (US 6,518,660 B2).

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In re claim 7, Arndt shows all of the elements of the claims except the grooves in the base material to enhance anchorage which Kwon et al. discloses (col. 3, lines 60-65). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the package of Arndt by forming grooves in a base layer as taught by Kwon to enhance adhesion of subsequently adhered devices and components.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Waitl et al. (US 6,624,491 B2) and Roberts et al. (US 6,335,548 B1) also show optoelectronic device encapsulated in transparent material.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E Warren whose telephone number is (571) 272-1737. The examiner can normally be reached on Mon-Thur and alternating Fri 9:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEW

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December 10, 2004

Tom Thomas
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